

## **Building Musculoskeletal Outcomes Research at the University of Iowa**

Mid-Career Award

NIH-NIAMSD: K24 AR062133

Peter Cram, MD, MBA, Principal Investigator

July 2012 to June 2017

### **Background**

Over the past eight years my colleagues and I have been systematically conducting patient-oriented research in the areas of osteoporosis and joint arthroplasty. In the area of osteoporosis, through a series of progressive studies, we have explored how best to communicate dual energy x-ray absorptiometry (DXA) results to patients and, more broadly, how to communicate tests results, in general, to patients. Specifically, we have examined how DXA testing centers can reduce "missed" DXA results and improve patient satisfaction and treatment of osteoporosis by mailing results directly to patients. In the area of orthopaedics, we have systematically evaluated variations in total hip arthroplasty (THA) and total knee arthroplasty (TKA) outcomes and utilization.

### **Objectives**

The objective of the current K24 Midcareer Investigator Award is to allow me to increase my mentoring of trainees in the areas of osteoporosis and orthopaedics. There is significant need for such mentoring here at the University of Iowa particularly among Internal Medicine subspecialties and Orthopaedic Surgery.

### **Methods**

We have carefully designed three projects that will advance science in the areas of: A) communication of DXA results to patients; B) evaluation of THA and TKA outcomes. The specific projects are:

Aim 1) To investigate optimal textual and graphical methods for conveying DXA results and fracture risk to patients;

Aim 2) To bring UI joint arthroplasty data into a national joint registry being funded by AHRQ; and

Aim 3) To explore variations in joint arthroplasty outcomes and utilization in key patient subgroups including men and women and older and younger adults. Together, these projects will allow mentees to be involved in cutting-edge research while being trained in qualitative and quantitative methods. Likewise these studies will advance knowledge in key areas of musculoskeletal health.

### **Status**

Data Collection

**Impact**

The goal of this proposal is to build a world class program in musculoskeletal patient-oriented research at the University of Iowa. The study Principal Investigator (Dr. Peter Cram) has developed three distinct projects to foster the training and growth of mentees. These projects focus on critically important areas including improving communication of dual energy x-ray absorptiometry (DXA) results to patients and studying variation in joint arthroplasty utilization and outcomes. In total, this study will result in numerous research opportunities for trainees while advancing knowledge in osteoporosis and orthopaedics.